## REMARKS

Summary

This Amendment is responsive to the Office Action mailed on November 26, 2003. Claims 19-21 are new. Claims 1-21 are pending in the application.

Claims 1-18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Eleftheriadis (US 6,092,107).

Claims 1-18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Casalino "MPEG-4 Systems, Concepts and Implementations" (Casalino).

Applicants respectfully traverse these rejections in view of the comments which follow.

Discussion of Amended Claims

New claims 19-21 are dependent on claims 1, 13, and 14, respectively. New claims 19-21 each specify that an adaptation layer is provided for receiving the bitstream. The content decoders receive the respective elementary streams from the adaptation layer, the composition engine receives the scene description information from the adaptation layer, and the terminal manager receives the object descriptor information from the adaptation layer (See, e.g., Applicant's Figure 1).

Discussion of Eleftheriadis

Eleftheriadis discloses a system for interfacing MPEG-coded audiovisual objects. The Examiner has equated the elements of Figure 2 of Eleftheriadis with the elements of Applicant's claims. In particular, the Examiner has indicated that: (1) the Java Virtual Machine and Java Media Framework (JVM and JMF) 110 together with the BIFS Decoder and Scene Graph 225 are equivalent

to Applicant's claimed terminal manager; (2) the Compositor 282 is equivalent to Applicant's claimed composition engine; (3) the decoders 270, 271, and 272 are equivalent to Applicant's claimed content decoders; (4) the renderer 284 is equivalent to Applicant's claimed presentation engine (Office Action, pages 2-3).

In order for a claim to be anticipated under 35 U.S.C. § 102, each and every element of the claimed invention as set forth in the claim must be disclosed in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. Applicant respectfully submits that the arrangement and function of the system disclosed in Eleftheriadis is substantially different than that of the present invention, and that the rejection under 35 U.S.C. § 102(e) is therefore improper.

For example, with Applicant's claimed invention, the composition engine recovers scene description information from the bitstream that defines specific ones of the recovered multimedia objects that are to be provided in the multimedia scene, and characteristics of the recovered multimedia objects in the multimedia scene. In contrast, in Eleftheriadis, the scene descriptor information is apparently recovered by the BIFS decoder and scene graph 225, which the Examiner has equated with Applicant's claimed terminal manager.

Further, the compositor 282 of Eleftheriadis positions the decoded media relative to each other based on BIFS decoder and scene graph 225 and composes the scene, and this information is conveyed to the renderer 284 (Col. 6, lines 37-42). Therefore, the compositor 282 is not equivalent to Applicant's claimed composition engine as asserted by the Examiner. Applicant's claimed composition engine does not position the decoded media relative to each other as does the compositor 282 of Eleftheriadis. In contrast to Eleftheriadis, Applicant's claimed

composition engine recovers the scene description information from the bitstream and uses this information, together with object descriptor information provided from the terminal manager, to produce a list of specific recovered multimedia objects that are to be displayed in a multimedia scene. This list is then provided to the presentation engine, which retrieves the corresponding decoded multimedia objects from the content decoders.

The compositor 282 of Eleftheriadis does not recover scene description information as does Applicant's claimed composition engine. Further, the compositor 282 of Eleftheriadis does not receive object descriptor information from a terminal manager as does Applicant's claimed composition engine. Finally, the compositor 282 of Eleftheriadis does not create a list of specific ones of the recovered multimedia objects that are to be displayed in the multimedia scene in response to the recovered object descriptor information and the recovered scene description information, as does Applicant's claimed composition engine.

The Examiner asserts that the compositor 282 of Eleftheriadis creates a list of specific ones of the recovered multimedia objects that are to be displayed in the multimedia scene. The Examiner also asserts that the renderer 284 Eleftheriadis obtains this list from the compositor 282 and retrieves the decoded objects from the decoders in response to the list. Applicant respectfully submits that there is no disclosure or remote suggestion anywhere in Eleftheriadis of the creation of a list of specific ones of multimedia objects or that such a list is used by a presentation engine to retrieve the decoded multimedia objects from the decoders, as set forth in Applicant's claims. Therefore, the § 102 rejection cannot stand.

In addition, the JVM and JMF 110 together with the BIFS Decoder and Scene Graph 225 of Eleftheriadis are not equivalent to Applicant's claimed terminal manager as asserted by the

Examiner. Applicant's terminal manager recovers object descriptor information from the bitstream that associates recovered multimedia objects with respective ones of the elementary streams, and provides the object descriptor information to the composition engine. There is no disclosure or suggestion in Eleftheriadis that either the JVM and JMF 110 or the BIFS decoder and scene graph 225 recovers object descriptor information from the bitstream and provides the object descriptor information to the composition engine, as claimed by Applicant.

Finally, the renderer 284 is not equivalent to Applicant's claimed presentation engine as asserted by the Examiner. Applicant's presentation engine obtains a list of recovered multimedia objects from the composition engine, and, in response thereto, retrieves the corresponding decoded multimedia objects from the content decoders to provide data corresponding to the multimedia scene to an output device. As discussed above, there is no disclosure or suggestion in Eleftheriadis that the renderer 284 receives a list of recovered multimedia objects from a composition engine. Further, the renderer 284 does not retrieve the decoded multimedia objects from the decoders. Rather, the multimedia objects in Eleftheriadis are passed from the decoders 270, 271, and 272 to the compositor 282, where they are positioned relative to one another before being passed on to the renderer 284 (Col. 6, lines 37-42; Figure 2).

With Applicant's claimed invention, the terminal manager, composition engine, and the content decoders function in parallel with each other, while the presentation engine follows the content decoders (see, e.g., Applicant's Figure 1). This arrangement enables the composition and the presentation of content to be performed independently so that the presentation engine does not have to wait for the composition engine to finish its tasks before the presentation engine accesses the presentable objects (see, e.g., Applicant's specification, page 5, lines 20-

25). The system of Eleftheriadis does not provide this advantage, as the renderer 284 is responsive to and dependent on information from the compositor 282 and the renderer cannot obtain the multimedia objects directly from the decoders. As can be seen from Figure 2 of Eleftheriadis, the compositor 282 does not function in parallel with the content decoders 270, 271, 272. Rather, the compositor 282 follows the decoders and the renderer 284 follows the compositor 282. Therefore, the renderer 284 must wait for the compositor 282 to process the objects before the renderer can act on them.

Discussion of Casalino

Casalino discloses an MPEG-4 system that is substantially similar in structure and operation to the system of Eleftheriadis discussed above. In particular, the system shown in Figure 3 of Casalino is similar to Figure 2 of Eleftheriadis. Therefore, the arguments set forth above with respect to Eleftheriadis are equally applicable to Casalino.

In particular, the Examiner has equated the scene graph function of Casalino with the composition engine of Applicant's claimed invention (Office Action, page 7). The scene graph function of Casalino does not receive object descriptor information from a terminal manager as does Applicant's claimed composition engine. In addition, the scene graph function of Casalino does not create a list of specific ones of the recovered multimedia objects that are to be displayed in the multimedia scene in response to the recovered object descriptor information and the recovered scene description information, as does Applicant's claimed composition engine.

The Examiner asserts that the scene graph function of Casalino creates a list of specific ones of the recovered multimedia objects that are to be displayed in the multimedia

scene (Office Action, page 7). The Examiner also asserts that the Presenter T of Casalino obtains this list from the scene graph function and retrieves the decoded objects from the decoders in response to the list. Applicant respectfully submits that there is no disclosure or remote suggestion anywhere in Casalino of the creation of a list of specific ones of multimedia objects or that this list is used by a presentation engine to retrieve the decoded multimedia objects from the decoders, as set forth in Applicant's claims.

Further, the Presenter T of Casalino is not equivalent to Applicant's claimed presentation engine as asserted by the Examiner. Applicant's presentation engine obtains a list of recovered multimedia objects from the composition engine, and, in response thereto, retrieves the corresponding decoded multimedia objects from the content decoders to provide data corresponding to the multimedia scene to an output device. As discussed above, there is no disclosure or suggestion in Casalino that the Presenter T receives a list of recovered multimedia objects from a composition engine. Further, the Presenter T does not retrieve the decoded multimedia objects from the decoder. Rather, the multimedia objects in Casalino are passed from the decoder to the scene graph function before being passed on to the Presenter T (Figure 3). Since Casalino does not include each and every element of Applicant's claimed invention, the § 102 rejection is improper.

Casalino, like Eleftheriadis discussed above, does not provide the advantage of the present invention, which enables the composition and the presentation of content to be performed independently so that the presentation engine does not have to wait for the composition engine to finish its tasks before the presentation engine accesses the presentable objects. As can be seen from Figure 3 of Casalino, the scene graph function does not function in parallel with the decoder. Rather, the scene graph

function follows the decoder and the Presenter T follows the scene graph decoder.

Applicants respectfully submit that the present invention is not anticipated or rendered obvious by either Eleftheriadis or Casalino, or any of the other prior art of record.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the above discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Withdrawal of the rejections under 35 U.S.C. § 102(e) is therefore respectfully requested.

Conclusion

In view of the above, the Examiner is respectfully requested to reconsider this application, allow each of the presently pending claims, and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,

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